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10/586,603

07/20/2006

Appukuttan Nair Sreekumaran

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49443 7590 02/18/2010  
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EXAMINER

SAVAGE, MATTHEW O

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

02/18/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/586,603 | <b>Applicant(s)</b><br>SREEKUMARAN ET AL. |  |
|                              | <b>Examiner</b><br>Matthew O. Savage | <b>Art Unit</b><br>1797                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amendment changing “upto 150 nm” to “which is not more than 150 nm” on line 3 of claim 1 is considered new matter since the original disclosure fails to have basis for claiming a nanoparticle size equal to 150 nm”.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinig, Jr..

With respect to claim 1, Heinig discloses silver deposited on activated alumina, the silver obviously being in the form of nanoparticles having a size up to 150 nm since

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it is in a colloidal form and is deposited on the alumina using a method that is similar to that disclosed in the instant specification (see lines 6-40 of col. 6). The specific method steps for making the composition recited on lines 4-10 fail to carry patentable weight since applicant has failed to provide experimental evidence that such process steps would result in a product that was materially different from that disclosed by Heinig.

Concerning claim 3, Heinig fails to specify the activated alumina and other substrates as being in the form of powder, however, such a modification would have been obvious in order to maximize the surface area of the adsorbent for a particular application.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan.

With respect to claims 1-2, Yan discloses gold and silver deposited on activated alumina (see from line 56 of col. 3 to line 16 of col. 4), the gold and silver obviously being in the form of nanoparticles having a size up to 150 nm since it is deposited on the alumina using a method that is similar to that disclosed in the instant specification (see lines 10-36 of col. 6). The method steps for making the composition recited on lines 4-10 fail to carry patentable weight since applicant has failed to provide experimental evidence that such process steps would result in a product that was materially different from that disclosed by Yan.

Concerning claim 3, Yan fails to specify the activated alumina as being in the form of powder, however, such a modification would have been obvious in order to maximize the surface area of the adsorbent for a particular application.

Regarding claim 4, Yan includes activated carbon (see line 61 of col. 3).

Applicant's arguments filed 12-22-09 have been fully considered but they are not persuasive.

Applicant's arguments that Kayimi et al disclose the silver to be in an ionic state are noted, however, Heinig and Yan both disclose silver in a reduced metallic/neutral state. Accordingly, the rejection over Kayimi et al has been withdrawn and the rejections over Heinig and Yan have been maintained.

Applicant's argument that the prior art fails to disclose all of the process steps that have been added to claim 1 is noted and agreed with, however, the rejections have been maintained since process limitations fail to give patentable weight to a composition claim unless applicant can provide experimental evidence showing that the process steps yield a materially different composition relative to that disclosed in the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew O Savage/  
Primary Examiner  
Art Unit 1797

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